REMARKS / ARGUMENTS

In response to the office action of November 25, 2009, Applicants have amended claims 1, 3-9, 11-14, and 20, and canceled claim 15, which when considered with the following remarks, is deemed to advance prosecution of this application. Favorable consideration of all pending claims is respectfully requested.

Claims 3-9, 11-15 and 20 remain objected to, due to the absence of an article at the beginning of the claim (claims 11-15 and 20) or because of the use of an improper article at the beginning of the claim (claims 3-9). As suggested by the Examiner, by this amendment claims 3-9 and 11-14 have been amended to recite in relevant part: "The method" in order to overcome the objection. Claim 15 has been canceled without prejudice. Claim 20 has been amended to recite in relevant part: "A method". Withdrawal of the objection to claims 3-9, 11-15 and 20 is therefore respectfully requested.

Claims 1, 3-9, 11-15 and 32-36 have been rejected as allegedly failing to comply with the written description requirement. According to the examiner, claim 1 as previously amended does not find support in the application as filed and thus, allegedly constitutes new matter. The examiner has indicated that paragraph [0110] of the published application does not support the amendment to claim 1. Applicants respectfully submit that paragraph [0010] of the published application *does* support the amendment and that due to a typographical error, Applicants previously directed the Examiner to the wrong paragraph. Paragraph [0010] specifically teaches that a B-type CDK nucleic acid encodes a protein having a PPTALRE motif with no mismatches or with a mismatch at position 2 and/or 4 from left to right, as well as a catalytic kinase domain and a T-loop activation domain.

In addition, Table 1 of the application lists 21 different B-type CDKs and their accession numbers, which sequences were readily available to one skilled in the art at the time the application was first filed. There is no *per se* rule that whenever a claim limitation is directed to a macromolecular sequence, the specification must always recite the gene or sequence, regardless of whether it is known in the prior art." *See Falkner v. Inglis*, 79 USPQ2d 1001 (Fed. Cir. 2006). Further, in *Capon v. Eshhar*, 76 USPQ2d 1078, at 1084-1085 (Fed. Cir. 2005), the Federal Circuit had ruled that it is error to find an application does not meet the written description requirement because it does not reiterate the already published structure, formula or chemical name for a sequence recited in the claims.

Accordingly, withdrawal of the rejection of claims 1, 3-9, 11-15 and 32-36, under the written description provision of 35 U.S.C. §112, first paragraph, is respectfully requested.

Claims 1, 3-9, 11-14, 20 and 32-36 have been rejected under 35 U.S.C. §112, first paragraph, as allegedly directed to non-enabled subject matter. It is the position of the Examiner as set forth on page 4 of the office action that the claims should be limited to the GOS2 promoter of SEQ ID NO:15 operably linked to a nucleic acid molecule encoding a B-type CDK protein of SEQ ID NO:4 , or the beta expansin promoter of SEQ ID NO:14 operably linked to a nucleic acid molecule encoding a B-type CDK protein of SEQ ID NO:2, or a GOS2 promoter of SEQ ID NO:15 operably linked to a nucleic acid molecule encoding a B-type CDK protein of SEQ ID NO:6.

According to the examiner, the full scope of the claimed invention is not enabled because plants transformed with nucleic acids encoding B-type CDK proteins cannot be predictably screened and selected for increased yield, increased growth rate and modified architecture, since the transformation of plants with nucleic acids does not always result in the desired phenotypes. Porceddu A. et al., "A Plant-specific Cyclin-dependent Kinase is Involved in the Control of G2/M Progression in Plants" *The Journal of Biological Chemistry*, September 28, 2001, Vol. 276, No. 39, pp. 36354-36360, is specifically cited for allegedly teaching that plants overexpressing CDC2bAt or CDC2bAt-D161N under the control of a strongly constitutive promoter show no discernable phenotype. *See* Porceddu A. et al., page 36358, column 1 and Figure 6; page 36359, column 1.

As presently amended, claim Claims 1 and 20 recite in relevant part: "introducing into a plant a gene construct comprising a nucleic acid molecule encoding a B-type CDK protein operably linked to a promoter, said CDK protein ..." Further in response to the enablement rejection, Applicants respectfully submit that the authors of Porceddu A. et al., did not screen for increased yield, increased growth rate or modified architecture as recited by Applicants' claims. Applicants direct the Examiner to page 36358 of Porceddu A. et al. under "*Ectopic Production of Either CDC2bAt or CDC2bAt-DN161N Does Not Affect Plant Morphology*" where the authors state that "T0 seeds were germinated on nonselective medium for *two weeks*, and the phenotypes of the segregating populations of plants were compared..." (emphasis added). Figures 6a and 6b show such seedlings, which in addition to showing a cotyledon, might appear

have their first true leaf. The legend to Figure 6 again discloses that "the phenotypes of seedlings (representative lines WTW-23 and DN-1) 2 weeks after *in vitro* germination. No morphological differences can be observed."

It is respectfully submitted that one skilled in the art would reasonably understand that in order to screen for increased yield, increased growth rate or modified architecture in a transgenic plant, the material being screened should indeed be a plant, and not a two week old seedling. Further, one skilled in the art would reasonably believe that the phenotype of a two week old seedling would not be entirely indicative of the presently claimed phenotypes.

In order to be considered enabling, the specification must teach a skilled artisan how to make and use the full scope of the claimed invention without "undue experimentation." *Genentech Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1365, 42 USPQ2d 1001, 1004 (Fed. Cir. 1997); *In re Wright*, 999 F. 2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). In performing the analysis, the key word is "undue", not "experimentation." *In re Angstadt*, 537 F.2d 498, 504, 190 USPQ 214, 219 (CCPA 1976). The question of whether the claims of a patent are sufficiently enabled by a disclosure in a specification is determined as of the date the patent application was first filed. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986). Whether undue experimentation would have been required at the time the application was originally filed is not a single, simple factual determination, but is a conclusion reached by weighing many factual considerations. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). The test is not merely quantitative, as a considerable amount of experimentation is permissible, if it is merely routine (such as routine screening), or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed. *In re Wands*, 858 F.2d at 737, 8 USPQ2d at 1404.

It is respectfully submitted, that one of ordinary skill in the art, having in hand the teachings of the present application and the literature extant at the time the application was filed (priority date), could implement the methods and compositions of the present invention without resorting to undue experimentation. Even if some experimentation may have been necessary, e.g., screening and selecting transgenic plants, such experimentation should not be considered

"undue" since it is merely routine. Further, the specification provides a reasonable amount of guidance with respect to the direction in which any experimentation should proceed.

The published application provides ample guidance with respect to various B-type CDKs which may be used (*see* Table 1), screening methods to find other CDKs (paragraphs [0012] and [0014-0086]) preferred CDK sequences (paragraphs [0084], [0126-0127]), various promoters which may be used (paragraphs [0087-0089] including Tables C and D), methods of different plant transformation (paragraphs [0104] to [0112], and selection of plants having modified growth characteristics (paragraphs [0114] to [0124] and Examples 7 and 8). Withdrawal of the rejection of claims 1, 3-9, 11-14, 20 and 32-36 under the enablement provision of 35 U.S.C. §112, first paragraph, is therefore respectfully requested.

Claim 1 and claims 3-9, 11-15 and 32-36 dependent thereon, have been rejected under 35 USC §112, second paragraph, as allegedly indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the examiner finds part (f) of claim 1 indefinite, because it is allegedly unclear what type of plant the increased parameter is being compared to. By this amendment, claim 1, step (f) has been to recite: "wild type plant" rather than "control plant." Support for such an amendment may be found on page 12 of the published application, paragraph [0113]. Withdrawal of claims 1, 3-9, 11-15 and 32-36 under the second paragraph of 35 U.S.C. §112 is therefore warranted.

Claim 15 stands rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Inze D. et al., (WO 98/41642, published September 24, 1998) in view of Boudolf V. et al., (June, 2001) "Identification of novel cyclin-dependent kinases interacting with the CKS1 protein of *Arabidopsis*" *J. Exp Bot. 52*(359): 1381-1382. In order to advance prosecution of this application, claim15 has been canceled without prejudice. Applicants reserve the right to file a continuation application directed to the subject matter of claim 15.

In view of the foregoing remarks and amendments, it is believed that the present application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,

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